Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	157	determin$4 near8 position near8 (optical or camera) with (infrared or IR or infra$1red)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/05/05 14:05
L4	350	"348"/$.ccls. and range$3 same (detect$3) same (IR or infrared$4) and camera$1	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/05/05 14:13
L5	180	4 and visible$1 same (light$3 or wave$3)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/05/05 14:31
L6	95	4 and 348/2$5.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/05/05 14:36
L7	65	captur$3 same (visible$1) same (image$1 or picture$1) same (based$3) same (infrared$3 or IR$1) near20 (image$1 or picture$1) and (CCD or sensor$1 or camera$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/05/05 14:37
S1	415	image$1 with form$3 with position with infrared	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/02/11 10:36
S6	101	determin$4 same visible same (image with position) same infrared	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/02/11 11:57
S7	3539	failure same visibl$3	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2004/02/11 11:58

EAST Browser - L20: (8) separat$3 se... | US 5396282 | Tag: S | Doc: 2/8 | "Full" 6/17 (Total images 17)

File Edit View Tools Window Help

US-PAT-NO: 5396282

DOCUMENT-IDENTIFIER: US 5396282 A
See image for Certificate of Correction

TITLE: Image mapping radiomete
registration device

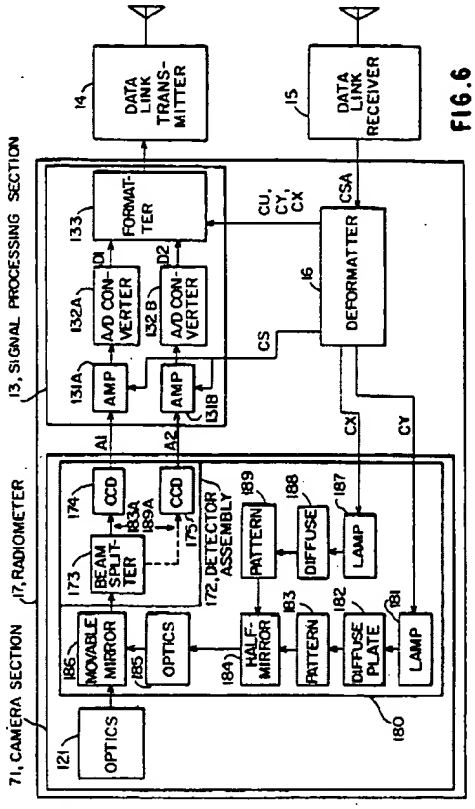
---------- KWIC ---------

Brief Summary Text - BSTX (5):
The image mapping radiometers described abc
of
visible rays or infrared rays radiated or refl

Details | Text | Image | HTML | KWIC

	Document I	Kind Code	Source	Issue D	Pages
1	US 5790234		USPAT	1998080	60
2	US 5396282		USPAT	1995030	17
3	US 4572627		USPAT	1986022	8
4	US 4196979		USPAT	1980040	11
5	JP 2003241		JPO	2003082	10
6	JP 2003140		JPO	2003051	8
7	JP 1106473		JPO	1999030	11
8	RU 2172982		DERWEN	2001082	1

Details | Text | Image | HTML



F16.6

Details | Text | Image | HTML | Full

EAST Browser - L20: (8) separat$3 se... | US 5790234 A | Tag: S | Doc: 1/8

File Edit View Tools Window Help

US-PAT-NO: 5790234

DOCUMENT-IDENTIFIER: US 5790234 A
See image for Certificate of Correction

TITLE: Eyeball detection appar

---------- KWIC ---------

Detailed Description Text - DETX (4):
In FIG. 1, there is shown a viewfinder eyep
dichroic
mirror 2 for separating infrared light servinc
indicates

Details | Text | Image | HTML | KWIC

	Document I	Kind Code	Source	Issue D	Pages
1	US 5790234		USPAT	1998080	60
2	US 5396282		USPAT	1995030	17
3	US 4572627		USPAT	1986022	8
4	US 4196979		USPAT	1980040	11
5	JP 2003241		JPO	2003082	10
6	JP 2003140		JPO	2003051	8
7	JP 1106473		JPO	1999030	11
8	RU 2172982		DERWEN	2001082	1

Details | Text | Image | HTML

US005790234A

United States Patent [19]
Matsuyama

[11] Patent Number: 5,790,234
[45] Date of Patent: Aug. 4, 1998

[54] EYEBALL DETECTION APPARATUS

[75] Inventor: Shiaichi Matsuyama, Tokyo, Japan

[73] Assignee: Canon Kabushiki Kaisha, Tokyo, Japan

[21] Appl. No.: 770,884

[22] Filed: Dec. 20, 1996

[30] Foreign Application Priority Data

Dec. 27, 1995 [JP] Japan 7-341039
Dec. 26, 1995 [JP] Japan 7-343103

[51] Int. Cl.[6] A61B 3/10; A61B 3/14

[52] U.S. Cl. 351/213; 351/210; 351/247

[58] Field of Search 351/205, 206, 351/210, 212, 247

[56] References Cited

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5,657,110 8/1997 Kosaki 351/213

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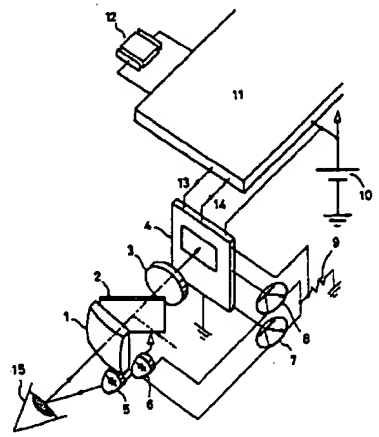
3-192336 8/1991 Japan .

Primary Examiner—Huy Mai
Attorney, Agent, or Firm—Fitzpatrick, Cella, Harper & Scinto

[57] ABSTRACT

An eyeball detection apparatus has a light-receiving device, a first determination circuit, and a second determination circuit. The light-receiving device receives a reflection image from the cornea of an eyeball of a user or a person being tested. The first determination circuit determines whether the signal of the reflection image from the cornea received by the light-receiving device exceeds a specified level. The second determination circuit determines whether the size of the reflection image from the cornea received by the light-receiving device falls in a specified range only when the first determination circuit determines that the signal of the reflection image from the cornea received by the light-receiving device exceeds the specified level. It is determined that the eyeball of the user or the person being tested has approached the apparatus only when the second determination circuit determines that the size of the reflection image from the cornea received by the light-receiving device falls in the specified range.

20 Claims, 38 Drawing Sheets



Details | Text | Image | HTML | Full

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